

ABSTRACT OF THE DISCLOSURE

A guidewire is formed from a wire twisted around a portion of a longitudinal axis. The guidewire has a first longitudinal edge and a second longitudinal edge. The guidewire may be formed from a kink-resistant material such as Nitinol, stainless steel or titanium. The first and second longitudinal

5 edges form a helical configuration such that the guidewire is capable of transmitting torque while remaining flexible. In one embodiment of the invention, the first and second longitudinal edges and the amount of twisting or pitching remain constant throughout the full length of the guidewire. In other

10 embodiments of the invention, the dimensions of the longitudinal edges and the amount of twisting or pitching may vary widely over the full length or different sections of the guidewire depending on the intended application of the wire. The guidewire may be formed from a single twisted wire of different cross-sections or a plurality of wires having similar or different shapes twisted together around a longitudinal axis. The plurality of wires may be two wires having generally

15 rectangular cross-sections with different dimensions, one wire having a generally rectangular cross-section and the other wire having a generally round cross-section, one wire having a generally rectangular cross-section and the other wire having a generally triangular cross-section, and a plurality of wires having generally round cross-sections, and the wires may be helically twisted together

20 forming a guidewire. The wires may be held together by the sheer force of being twisted together around a longitudinal axis, or the wires may be glued or soldered together, either along the entire length of the wires or by spot gluing or soldering.